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AUGUST, 1895.

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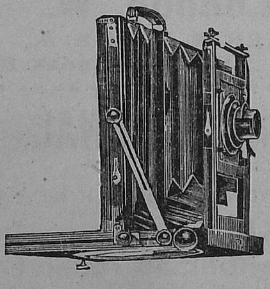

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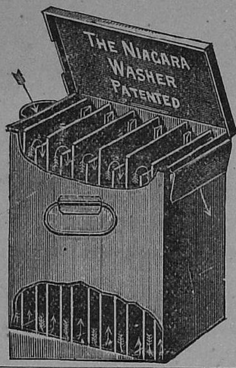

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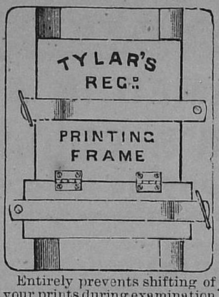

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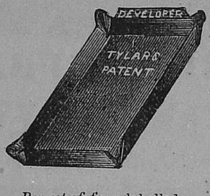

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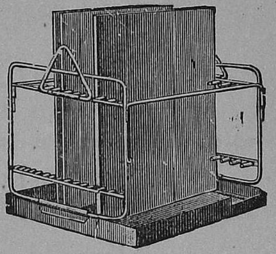

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Journal of the Amateur Photographic Society of Madras.

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EDITORIAL.

THIN Meeting—Question Box—Magic Lantern—Critic criticised—Babies—Illustrated London News—Lightning.

As the time for going to Press approaches, we find the above headings awaiting elaboration into an editorial note. The meagre attendance at this month's meeting of the Society, owing to absences from Madras, prior engagements, and depressing climatic environment, was balanced by the election of four new members, and by the exhibition of an exceptionally large number of pictures, illustrating Native Industries. One of these, our anthropological editor was sorely tempted to steal for his collection. The question box (which, by the way, is not sufficiently patronised) contained the following riddle: "How are blue tattoo-marks on a very dark skin best brought out in a negative?" As none of those present could give a precise answer, such as the questioner demanded, the Secretary was asked to look up the subject of orthochromatic photography. The President of the Society was announced to give a lantern-slide exhibition, but, apart from the gloom of giving a demonstration for the benefit of only the Acting Secretary, the Editor of the Journal, and the punkah cooly, the entertainment had to be abandoned, inasmuch as the butler of our Secretary, who is indulging in a well-earned spell of leave, refused to hand over charge of the magic-lantern and screen to his representative during his absence.

It is frequently the very painful duty of those who sit in judgment to criticise pictures, which are sent in for exhibition, in an adverse spirit, and it has been suggested that exhibitors would have their revenge if the judges were compelled, from time to time, to circulate, for criticism by other members of the society specimens of their own work.

The subject, selected for illustration at the September meeting of the society, is 'Children'; and, as we are none of us professional portrait-takers, the following notes extracted from an article on photographing children in *The Practical Photographer* may be of some use to intending exhibitors. "As regards costume, light tints and soft materials are generally best, as admitting of short exposures and artistic arrangement. Then comes the treatment of our little sitters. First, a child, just the same as a grown up person, must be made to feel 'at home'. How to do this is not so easy to describe as to practice, and the mode of procedure must vary with the subject to be dealt with. A little observation and experience in the reading of character, such as the good photographer should be always endeavouring to acquire, will do much to begin with, and then 'making friends' is not difficult, if the photographer remembers that it is as a friend, or even as a play-fellow, that his sitter must regard him, if he is to produce successful results. Tact and patience are then the first essentials of success; added to which must be artistic taste and skill in the matter of posing and lighting. Here naturalness must be the first consideration, and strained and set poses, and unaccustomed occupations, avoided. Let the child have its books and its toys, but do not overburden your picture with furniture and accessories, until it might be a puzzle with the legend 'Find the Child'! With regard to posing, let nature do as much as possible, only making such corrections as the rules of pictorial composition, and the necessities of perspective as photographically rendered, may require. When the happy moment of good expression, which you have all the time been trying to induce, arrives, be quick to seize it. Develop with care and judgment. Limit the retouching to the necessary and improving (the skin of a healthy child should not need a great deal); print in one of the many artistic and permanent processes we now possess, and your task is done".

Á propos of the beautiful photographs of lightning by Mr. Michie Smith (who was asked

whether the flash was scratched on the negative with a knife), which were sent to the Photographic Exhibition at the Imperial Institute, we note, from a paper read at the Society of Amateur Photographers of New York, that Sir Frederick Leighton exhibited at the World's Fair a painting where, perhaps, for the first time an artist has given lightning its true form; and that Nasmyth, of steam hammer fame, read a paper before the British Association in 1856, calling attention to the erroneous character of a lightning discharge as drawn by artists, a zigzag dove-tailed line, when the true and natural form of a primitive flash appears to be more correctly represented by an intensely crooked line, sometimes having branches.

We notice, as a sign of the times, that Sir W. Ingram, Director of the *Illustrated London News* stated, at an interview, that a new school of artists will arise, who will be required to compose drawings from photographs; but that it is his intention to introduce into the pages of his weekly more wood-engravings than have appeared for some time past. The results of photo-processes are undoubtedly accurate and artistic, but frequently have an irritating appearance of haze or flatness, and require close examination. We have repeatedly, when turning over the pages of modern illustrated periodicals, lamented the way in which the crude, but effective, wood-cut has had its nose put out of joint, and recall to mind the excellence of a double-page wood-cut (a triumph of rapid work,) in the *Illustrated London News*, representing the ex-Emperor Napoleon III lying dead at Chislehurst.

We cannot bring this note to a close without bearing mournful testimony to the loss to photography, both professional and amateur, in Southern India, created by the untimely death of Mr. J. P. Nicholas, to whom the writer has oft-times been indebted for kindly advice and gentle criticism of his crude work.

OURSELVES.

Now that the first year of the existence of the Journal is drawing to an end, we not unnaturally look about us, and ask ourselves what good has been done by it, and in what way has the cause of amateur photography in general, and of our Society in particular, been advanced. Those who have had no experience of the cares of editorship can hardly be aware of the enormous amount of work and attention which are required to make the Journal of value to members, and to bring it out, without breach of contract, regularly up to date. We desire heartily to acknowledge the assistance that we as editors have received, not only in the form of contributions for publication, but also in the form of suggestion from members of the Society. With regard to contributions, which are necessary if we are not to degenerate into a mere scissors and paste periodical, we would plea

> Let those now give, who never gave before;
> And those who have done, let them give us more.

The suggestion with reference to criticism of pictures sent in for exhibition at the monthly meetings, brought forward in our last issue, appears, to judge from letters received, to have met with general approval; one member going so far as to say that the absence of criticism on pictures sent in for monthly competition has been the cause of a falling off in the number of exhibits.

We are induced to believe that the cause of amateur photography in Southern India has been benefited by the Journal, not only from the fact that the number of our members has increased, so that we confidently look forward to reaching our first century, but also from the fact that there are many subscribers to the Journal who are not members of the Society. We can only express a hope that those who are merely subscribers will lose no time in applying for the privileges conferred by membership of the Society.

If supported by a large number of members and subscribers, the usefulness of the Journal can be very greatly increased. The half-tone pictures, which are a special innovation in the present issue, were prepared at the Methodist Episcopal Mission Press, which has recently commenced operations in Madras. They are, we think, a step in the right direction, and should be continued so long as funds permit. How long this will be depends on the united efforts of amateur photographers at large in Southern India, and

THE AMATEUR EDITORS.

PRINTING ON BROMIDE PAPER.

By F. Dunsterville.

[*Read before the Society, 1891.*]

THE first mention that I find of the existence of bromide paper is Mr. J. W. Swan's patent for its invention in 1879; but my own experience is that its first production commercially was the work of Messrs. Morgan and Kidd, of Richmond, Surrey, some of whose paper I had sent out to me in 1880 or 1881. The manufacture of good bromide paper is evidently a work of some difficulty and magnitude, for while we find the makers of gelatine plates to be legion, the manufacturers of bromide paper of any repute are extremely few in number. I think Morgan and Kidd, Samuel Fry and Co., Mawson and Swan, the Eastman Co. and the Ilford Co. in England, and Anthony in America, about complete the list. Until within the last few years the ideal photograph was one on albumenized paper with highly polished surface, and even as late as 1887 I remember that the greater portion of the pictures shown at the Annual Exhibition of the Photographic Society of Great Britain were on albumenized paper—platinotypes and such like prints were specially pointed out in the catalogue as such, whereas the spread of mat-surface prints like platinotype, plain paper, and bromide paper finished with dull surface, has been so very great that at the last Exhibition of the London Society the announcement was made that all pictures are platinotype unless specially mentioned.

Dr. Emerson, in his "Naturalistic Photography," states that in his opinion there is but one process in which an art student can print, and that is platinotype. He further states that bromide prints are inferior to platinotype for artistic qualities. This may be so, but I have seen bromide prints that one could not possibly distinguish from platinotypes, and as the bromide process is infinitely easier to work, especially in such damp, hot climates as Madras, I think we may rest content, and be thankful that we have in bromide paper a very excellent substitute for its more distinguished brother.

Before I begin describing the actual process of printing on bromide paper, I would first of all impress most strongly upon everyone the absolute necessity for the most perfect cleanliness of everything used in the process. The operator's hands should be most carefully freed from all traces of chemicals, particularly pyro and hyposulphite of soda—paying particular attention to cleaning the fingers and nails. If possible the dishes and measures should be specially set apart, and not used for any other purpose. The measures should of course be glass, and they may be kept clean with nitric acid (1 of acid to 10 of water) applied with an old brush: the dish for the wetting of the paper before development should be of glass or china, but the developing dish should be of glass for small sizes up to 12" × 10", and above that size of glass with wooden sides well japanned or varnished. The hypo dish should be of glass if possible, as there is less risk of its getting contaminated with the solution.

The best negatives for bromide printing are those full of detail without excessive density or too much clear glass: a slightly over-exposed plate developed with one-half or two-thirds the proper quantity of pyro, and the development stopped the moment all detail is out, is to my mind the proper way of arriving at a perfect negative for bromide printing, and this is what I mean by a "normal" negative. Such a negative, when exposed for the proper time, will give a perfect bromide print with the normal developer mentioned hereafter, and will require no dodging of the lighting or alteration of the developer in any particular. These perfect negatives being very rare, it is fortunate that there are ways of attaining practically perfect results from negatives which err either on the side of excessive contrasts of density and high lights, (known photographically as "soot and whitewash") or of excessive thinness.

The mode of development therefore resolves itself into the three following phases :—

1. Normal negative with correct exposure requires the normal developer without change of any kind.

2. A negative with excessive contrasts requires excessive exposure with a corresponding weakening of the developer—say instead of 1 of iron to 6 of potash, it would require 1 of iron to 10 or 12 of potash.

3. A negative of excessive thinness requires very short exposure with very strong developer—say 1 of iron to 3 or 4 of potash.

The apparatus required for printing in bromide need only be of the simplest character where the amateur does very few prints at long intervals—an ordinary lamp with a fairly good burner (say Silber's No. 1) and a common printing frame being all that is absolutely necessary. But, when one wishes to do a good many prints, especially from the same negative, it then becomes advisable to adopt some plan whereby the least possible difficulty may be experienced in giving equal exposures at similar distances from the source of light. The piece of apparatus shown this evening has been specially designed by me to

ensure the best and most equal results without any trouble. It consists of a flat board 4 ft. long, 8 inches wide, and 1 inch thick. At one end is a recess cut into the board where the lamp fits in, and at intervals of 6 inches from the centre of the flame are pairs of holes, into which fit blocks of wood to hold the printing frame at known distances. The top of the block being pivoted enables the printer to put either end or side of the negative nearer the light, and thus give it the benefit of a stronger light. The block should be of such a height that the centre of the negative is exactly level with the centre of the light. It is also possible to obtain equal prints from negatives of unequal density by shading the lighter portion with a piece of cardboard cut, if necessary, roughly to shape. The cardboard should be moved up and down to prevent the masking being apparent in the finished print.

The normal distance at which I always do my bromide printing is 3 ft. from the centre of the light; but, in cases of dense negatives, this apparatus gives one the power of decreasing the distance to a known extent, and also of increasing it slightly, if necessary, for thin negatives. The lamp which I use for the purpose is a Victoria burner No. 30, and the corrugated chimney used therewith enables one to regulate the light very well. For instance, I always use it with the flame turned up to reach the top of the third corrugation, and with a clean wick evenly cut and good white kerosene oil, 150°, I find that I seldom have to give more than 60 seconds exposure, and as a rule it varies from 15 to 45 seconds.

It is very essential in printing a quantity of copies from the same negative that the printing frame should be at the same distance from the light, and that the time of exposure should also be exactly the same—the former is decided by the holes in the baseboard, and the time is decided by placing a watch on the small stand in the centre of one side of the board opposite to the printer. This is a small thing, but saves a deal of worry. It is advisable to keep a record of the proper exposure for each negative when once ascertained, and if you always work with the same light at the same distance, you will always be able to ensure perfect results—provided the negative is a good one.

The only other special piece of apparatus is the printing frame, which I show herewith. The ordinary frame allows a certain amount of light to leak in at each end, but filling up the two ends in the manner shown puts a stop to that danger, and in no way interferes with the usefulness of the frame for other purposes.

It may be as well to say a few words on the influence of distance from source of light on exposure required. The power of light varies as the square of the distance, that is, the exposure at 2 feet is four times, and at 3 feet nine times, what it would be at 1 foot. This is the theory; but practically I do not find that long exposures at greater distances give exactly the same results as equivalent exposures at shorter distances. A densish brilliant negative may give excellent results with, say, 60 seconds exposure at 3 feet. I do not find that an exposure of 240 seconds at 6 feet gives the same result. Why it does not do as it ought I cannot say, but I expect it is from the same cause that enables one to get a comparatively bright print in *the shade* from a thin negative that in the sun would give simply blackness all over.

Care Required to Preserve the Paper.

The first point is absolute dryness, or as nearly so as possible (the paper will keep apparently for an unlimited time if kept in the dark and very dry.) After a packet is opened, the paper may either be kept in its original wrappers, or kept in a light-tight box. Edward's plate boxes are most handy for this purpose, and obviate the necessity of opening and closing the wrappers each time a piece of paper is required.

Amount of Light Allowable.

While the bromide paper is not nearly so rapid as the slowest of gelatine plates, yet white light is just as harmful, and packets of paper should only be opened in the dark-room. The amount of light allowable is, however, very great, and with one thickness of yellow glass or canary medium bromide paper may be worked with perfect safety. My usual light for developing at night is an ordinary hand-lantern placed under a rough wooden box with a light-tight tin top, and one of the sides of the box cut out and covered over with one thickness of canary medium. I find that everything in the dark-room is brightly lighted, while the light is so safe that I can develop a print from beginning to end at a distance of a couple of feet from the light, which enables me to see perfectly when to stop developing.

The following are as near as possible the exposures required for the different kinds of bromide paper that have come under my notice, the light used being a Silber burner No. 1, the wick being clean and new

and trimmed quite level, the oil being white kerosene 150°, the light being turned up to its maximum, that is, just short of smoking, distance between centre of flame and face of negative 2 feet, the negative being of a kind previously described as "normal" and the developer also being "normal":—

Eastman's ...	... 45 seconds.
Morgan and Kidd's	... 20 ,,
Mawson and Swan's	... 25 ,,
Ilford—Slow ...	... 40 ,,
Do Rapid ...	... 2 ,,

I have not had much experience with any but Eastman's and Morgan and Kidd's paper, so the exposures of the other kinds may be slightly inaccurate; but I think they will be found about right. Anthony's paper I have not tried at all.

I have selected a Silber burner as my standard of illumination as they are to be obtained everywhere, whereas the lamp I use for the purpose is a special one only to be obtained at R. Ditmar's Lamp Warehouse, Bombay, and very much more expensive. The above table will, with a little consideration, enable any careful worker to construct a table for himself specially suited to his own style of negative.

Developing, Clearing, and Fixing Solutions.

1. Saturated solution oxalate of potash, acid with citric acid $\frac{1}{4}$ ounce to 1 quart.
2. Saturated solution ferrous sulphate, acid with sulph: acid, 1 drachm to 1 pint.
3. Bromide of potassium, 12 grains to the oz.

Or, as the Eastman Co. put it:—

1. Oxalate potash 1lb., water 48 oz., acetic acid 3 drs.
2. Ferrous sulph 1lb., water 32 oz., citric acid $\frac{1}{4}$oz.
3. Bromide of potassium 1 oz., water 1 quart.

Mode of Making the Solutions.

To make up the solutions, the potash should be crushed as fine as possible, and the necessary quantity of boiling water poured on to it in a basin. As soon as cool make faintly acid with citric acid (about $\frac{1}{4}$ ounce to a quart) and filter into a clean bottle, which should be *corked*, not stoppered—a cork can always be most easily removed; a glass stopper very frequently sticks and gives trouble.

The sulphate of iron crystals should be quite clean, of a clear, pale green colour—if at all dirty or yellow they should be washed in cold water until clean, and then dissolved in the proper quantity of boiling water, allowed to cool, the sulphuric acid added and shaken up [the sulphuric acid may be added to the water before pouring on to the iron, and is said to then give more permanent results] then filtered into small bottles, which should be corked and sealed. If the operator uses a good deal of bromide paper, 4 oz. or 6 oz. bottles may be used; but if it is only very occasionally that printing is done, then 1 or 2 oz. ounce bottles are big enough. When properly made and put up, the iron solution will keep bright and green for many months, otherwise it turns yellow very soon, and rapidly loses its developing power. What I am using this evening was made up over 6 months, ago and shows no signs of deterioration. The bromide solution needs no explanation.

The normal developer for a perfect negative exposed for exactly the correct time is:—

No. 1. 6 ounces
,, 2. 1 ounce
,, 3. $\frac{1}{2}$ drachm } or proportionate quantities.

N. B.—Pour No. 2 into No. 1 and never *vice-versa.* No. 3 may first be poured into No. 1 or into the mixture of No. 1 and 2.

As perfect negatives are very rare and exactly correct exposures not always attainable, it is probably a better way to give slightly more than the proper exposure, and weaken the developer to a corresponding extent. I find that a normal developer with about 10 per cent. of acid water added thereto (that is $\frac{3}{4}$ oz. water added to the above 7 ozs. developer) works very surely, giving quite black tones with an equivalent exposure. The acid water referred to is the clearing solution used always after the development is complete, and is made up of citric acid 60 grs. to 1 quart water. This is Eastman's formula, but I find it simpler to keep a small bottle of citric acidsat urated solution, and add $\frac{1}{2}$ ounce to 2 quarts water when about to develop some prints. The fixing bath should be hyposulphite of soda 3 ozs. to the pint, and should be made very faintly alkaline with liquor ammoniœ.

Before proceeding to develop the print, after taking it off the negative in the printing frame, it is necessary to damp it thoroughly to prevent, 1st, its curling when the developer is poured over it, 2nd, to enable the developer to flow smoothly all over the whole surface at once, and, 3rd, to cause the paper to lie flat on the bottom of the dish, and thus enable one to use a smaller quantity of developing solution. It is advisable to keep a dish full of clean water rather larger than the print to be developed. Taking hold with the right fore-finger and thumb of the centre of the top of the paper, press the top end under water

and pull it through, placing the left hand on the back of the paper while being pulled through the water. When the whole sheet is submerged, let it rest under water for half a minute or so until it is perfectly limp and soft, for in this way there is not the slightest risk of air-bubbles—the water should be quite cold. Take the paper up carefully and lay it, face upwards, in the dish in which you propose to develop the print. This dish should have a flat bottom, and be as nearly as possible the exact size of the paper.

After draining all the water off, pour the developer over the paper in one sweep, moving the developing cup down one side of the dish while pouring the developer out. Rock the dish quietly, seeing that all parts of the paper are equally covered, and if the paper has been properly exposed, the picture will begin to appear in from 15 to 20 seconds, and gradually gain intensity. *Just before* the picture is, in your opinion, developed enough, pour off the developer quickly and cover the print with the clearing solution, seeing that it runs completely over the paper, washing all the iron developer away, raise the paper so that the acid water may run under the print, and wash the developer off the back. Pour off the first acid water and give it another supply, letting it soak well into the print.

[The developer may be used for several prints, so long as it remains bright and clear. I have frequently developed a dozen 12 x 10 prints with one lot of 7 ozs. of developer. The only difference I have found is that there is slight tendency towards the end to sepia or brownish tones.]

After a minute or two pour off the clearing solution and well wash the picture in plenty of clean water, until you feel sure that all the acid water is washed out of the print. Then drop the print lightly into the fixing solution, taking care not to touch the hypo with your fingers or to splash any about the table—it is as well, if possible, to get a second person to attend solely to the fixing part of the business. The print should remain in the fixing bath for not less than a quarter of an hour, being occasionally shaken up or turned over. Care should be taken that no air-bubbles form on the under surface of the print when in the fixing bath, and that the backs of the prints do not appear above the solution. My experience is that yellowing of the whites is almost sure to follow the latter fault, while all know the results of unequal or insufficient fixing.

After fixing for the proper time, wash well in several changes of water as for albumenized paper. Eastman's C paper is very easy to wash, as it floats on the water and the hypo gets dissolved and washed out by dialysis. Turn the print over now and then, and keep in mind that comparatively little washing in repeated changes of fresh water is infinitely preferable to long soaking in fewer changes.

Glazing and Drying Matt.

When the prints are sufficiently washed, you must decide whether you intend to let them have a glazed or dull surface—it is entirely a matter of taste, some like glazed pictures and many do not. My own opinion is that bromide prints, being more or less imitations of engravings, should under no circumstances be given a glossy surface; but as all do not think alike I give below a short description of the mode of glazing a print.

Take a glass, free from scratches, some 2 inches each way bigger than the print, thoroughly clean it with a little weak nitric acid and water (1 of acid to 40 of water)then dry it and dust over its surface some French chalk (a little of the powder in a muslin bag is a good way of applying this) rub well into the glass with a tuft of cotton wool, and brush lightly with a camel's hair dusting brush (the same as you dust gelatine plates with). Lay the glass, chalked side uppermost, at the bottom of a dish full of clean water, take the washed print and lay it on the glass under water, and bring the surfaces as closely as possible into contact, lift the glass, and squeegee the print lightly until perfect contact is obtained. Dry the back of the print and the glass gently with a clean cloth, and stand up to dry. When the back of the print seems pretty dry, it can be stood in the sun in a current of air and, when quite dry, will strip off most readily.

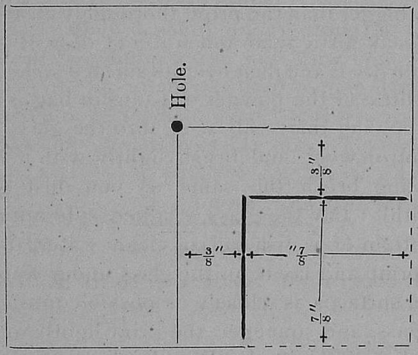
To dry the print with a matt surface it is only necessary to take the print from the washing water, and hang it up to drip dry. An easy way is to hang the print on a line by a doubly bent pin, putting a narrow strip of card on each side of print where the pin goes through, so as to prevent any tearing of the bromide print.

Mounting Glazed Prints.

To preserve the gloss, these prints should be mounted to a certain extent while on the glass in the following manner:—Take a piece of thin card-board and damp it until it is quite limp. Give it a coating of starch and press it strongly into contact with the back of the print, leaving it under heavy pressure to get dry, when the whole may be stripped off the glass.

Mounting and Framing.

The most suitable mounts are the white mounts with India tint centre, either printed on or a sheet of India paper of proper size mounted on the card, and a plate-mark impressed half an inch or so from the India tint. But bromide prints look very artistic if mounted on a plain mottled grey board with a line drawn round the print at a distance of $\frac{1}{4}$ to $\frac{1}{2}$ inch, according to the size of the picture. This is purely a matter of taste, and any one with any artistic ideas will probably be able to devise a method of mounting in a mode different from others and yet very suitable for his effects. It is generally very troublesome to draw lines round the mounted prints at exactly similar distances joined properly at the corners, but the piece of card-board shown below enables you to mark them off in a few seconds without the slightest trouble:—



Take a piece of card-board about $2\frac{1}{4}$ inches square and cut out one corner (dotted lines) say $\frac{7}{8}$ inch square; draw a line $\frac{3}{8}$ inch distance from each of the cut out sides, and make a hole with a needle point at the junction.

To use it, place the cut out part up against each corner of the print in turn, and make a mark with a pin or needle at the place where the hole is—join these holes by lines drawn with a pen, and there you are.

Framing is still more a matter of taste, and the above remarks apply still more forcibly to the finish of a picture. I find that a plain white cedar frame with a bevelled edge looks very well, and so does an exactly similar frame in rosewood, or a similar frame with reeded face and enamelled white with Aspinall's paint.

If your prints are very large (15×12 and upwards) they look very well framed close up to the picture with no part of the mount showing; but this mode of framing is more suitable to chloride than to bromide pictures.

Any defects in the prints should of course be removed after mounting and before framing. White spots can be filled up with water-colour paint of the proper tint, or with the new chalk pencils made expressly for finishing bromide prints. Black spots can be easily removed, especially from the rough C. paper, with the point of a sharp pen-knife, and the surface then worked up again to the proper tint with colour or pencil.

Before mounting a print it should be cut perfectly square—The easiest mode of doing this is with a sharp knife on a smooth dealwood board with perfectly straight and square sides, using a steel square of sufficient length—The first cut should be made at the sides to ensure their being quite parallel with any vertical lines that may appear in the print, and having got this right, the rest is very simple. Should a print of a house or other building show the lines converging slightly, through the camera swing-back not having been perfectly vertical, the sides of the print may be made to slightly converge also, but in that case the picture should be mounted on a plain board and not upon one with an India-tint. When this is carried out neatly the want of uprightness becomes practically invisible, unless it is a very bad case indeed.

The best material for mounting is undoubtedly freshly made starch, and, as some may not know how to make it properly, a short description is annexed. Take a dessert spoonful of starch (Glenfield's, for choice) put it into a clean, dry breakfast cup, and rub it down into a fine powder with the back of the spoon. Then add enough of cold water to make the starch into a thin paste (a couple of spoonfuls will be enough), rub it quite smooth and add boiling water until the starch turns clear; stir it well while adding the water, and stop adding water the moment it clears—let it get cold, when it should be a stiff jelly. Break it up with a spoon, put it into the centre of a clean handkerchief and squeeze it through the material into a clean cup, and use a stiff hog's hair brush (an ordinary painter's brush) to lay the starch on the back of the print. The principal things to note are that the water must be actually boiling when poured on to the starch paste, and that no more water be added after the starch clears.

The table of exposures given at an earlier part of this paper is only intended to give prints with tones ranging from black to white, but as black tones are not always suitable or desirable for certain subjects, I may as well say a few words on the method of obtaining other tones with comparative certainty. It may be taken as a rule that over exposure with consequent weakening of the developer results in a redden-

ing of the tone of the print, more or less, according to the amount of over-exposure. A print, over exposed to an extent of, say, 30 per cent. (80 secs. instead of 60 secs.) and developed with the normal developer correspondingly weakened will be of a very nice sepia tone.

A normal print when the development first begins, will be found (if taken out into day light) to be of quite a reddish tone, and it is only as development progresses that the color gradually changes to the intense black of a finished print.

A print that has been accidentally over-exposed, and which flashes up too rapidly when the developer is poured on, may be turned into a very successful picture by stopping the development just before the details in the highest lights appear, well washing and fixing, and then intensifying, after further washing, with a weak solution of mercury and ammonia as for gelatine plates. The print must be thoroughly well washed between the applications of the mercury and ammonia solutions. The results are of very doubtful permanency, but the idea may be useful in some cases, and so I mention it.

Printing in of Clouds.

It is undoubtedly a very great improvement to a picture of scenery to print in clouds, instead of leaving the sky a plain mass of white, and the following mode of procedure will enable anyone possessing a stock of cloud negatives to utilise them for this purpose. As a rule the skies on ordinary gelatine negatives are already sufficiently dense to ensure their being left quite white when printed on bromide paper, but in cases where this is not so, the sky must either be blocked out by paint or paper, or carefully shaded with a mask when printing the landscape. The cloud negative having been selected as suitable to the subject, (noting carefully that both cloud and landscape negative are lighted from the same side) and placed on a piece of clean glass in an ordinary printing frame, the bromide paper (after printing the landscape portion thereon) is placed over the cloud negative in its proper position, and exposed to the light of a lamp for some 7 to 10 seconds at a distance of 3 feet. The completed picture is then developed in the usual way.

When exposing the cloud picture to the light, the rest of the view should be carefully covered with a piece of cardboard, which should be moved about to prevent the junction of cloud and view being noticeable in the finished print. The cardboard may, if necessary, be cut roughly to the shape of the landscape, but it is not necessary to cover up bits of foliage standing against the sky, as the printing of the cloud over them will not show.

When giving the length of exposure as 7 to 10 seconds I refer to the usual kind of cloud negative on oiled paper or tissue, or to a new kind on thick carbon films. Cloud negatives on gelatine plates *may* require as long exposure as the landscape, but they should be as thin as possible consistent with full detail.

Another purpose for which bromide paper is largely used is in making direct enlargements from small negatives, and on some future occasion, when there is nothing else on, I shall be glad to show the process with a new way of developing large pictures without dishes, with which I have lately been very successful.

I have now, I think, gone into every detail likely to be of use to any one beginning bromide printing. Probably the whole of it may be known to many who hear or read these remarks, but I hope it may be of use to some even of them. I do not pretend to any originality or discovery. I have read most of what has been written on the process in the maker's instructions and the photographic Journals both English and American, and with this in my mind, and the experience I have gained from the many hundreds of experiments and prints I have made, I have written this paper. In conclusion, the two ideas to be kept before anyone who wishes to succeed in bromide-printing are "cleanliness and carefulness."

NOTES.

The Photographic Society of India has reproduced in their journal Dr. Van Geyzel's Paper on Lantern Slide Making.

The Platinotype Company are showing at the Aquarium Exhibition, London, some very good results on their papers, particularly their new C. C., which is said to be extremely effective. They also give demonstrations of printing on the paper by their oxymagnesium lamp and development of prints. So far as we know, none of this paper has yet come out to India. It is a stout paper, with a slightly rough surface, suitable for large or small work. No mounting is required, the print can be marked and required margin left, the paper being strong enough to dispense with any card mount.

Ross and Co.'s 1895 Catalogue.—We have received from Messrs. Ross and Co., London, their new enlarged Catalogue for 1895, containing illustrations of their many beautiful Lenses for Camera, Microscope, and Field work; Field Glasses, &c. They are valuable to have if anybody wants to keep up with the times.

The Catalogue of Taylor, Taylor and Hobson, Leicester, describes by good illustrations and other data their well-known Optical Lenses. Besides the fullest particulars of all their lenses, it contains some useful information regarding their choice and use, and also regarding the uniform standards for lens fittings known as the standards of the Royal Photographic Society, and with the establishment of which this firm is closely associated. The new Cooke lens is the latest form of objective manufactured by this firm. We understand that with full aperture of *f*/6 5 a perfectly flat image free from astigmatism is obtained. Such a lens as this is invaluable for copying.

OUR ILLUSTRATION.

The illustration this month represents a celebrated pool, called, we think, the "Peacock's Pool." The legend connected with this spot is as follows:—A short time before Sir Thomas Munro, Governor of Madras, died, whilst travelling to Bellary through the district of Cuddapah. He passed from the upper tableland of the valley below the ghauts through the pass where this picture was taken. Whilst riding, he suddenly looked up at the steep cliffs above and remarked to the natives riding behind him, "What a beautiful garland of flowers they have stretched across the valley." They all looked, but said they could see nothing. "Why, there it is! all made of gold!" Again they looked, and saw nothing. Sir Thomas made no further remark, but one of his old native servants quietly observed "Alas! a great and good man will soon die!" A few days afterwards, and Sir Thomas Munro had passed away.

The origin of the superstition, which is generally believed, is that when Ráma conquered Rávana in Ceylon and rescued Síta, he despatched news of victory to this country where he had lived so long in exile. On hearing, the Governor stretched across the gorge a wreath of golden flowers. From that day to this, though the original wreath has long since disappeared, its semblance appears, shortly before their death, to those whom the Gods love. It is a belief among the people to the present day that Munro was told the legend connected with it, and was so delighted that the vision should have been revealed to him, that he halted at an adjacent pagoda and there *offered sacrifices and presents to the Swami.*

How the pool became called the "Peacock's Pool" we do not quite know, and as Mr. Michie Smith, to whom we are indebted for this interesting picture, is away on leave, we are unable to make certain, but in all probability it acquired the name some time during the last century, when the district was in the hands of the celebrated Tippoo.

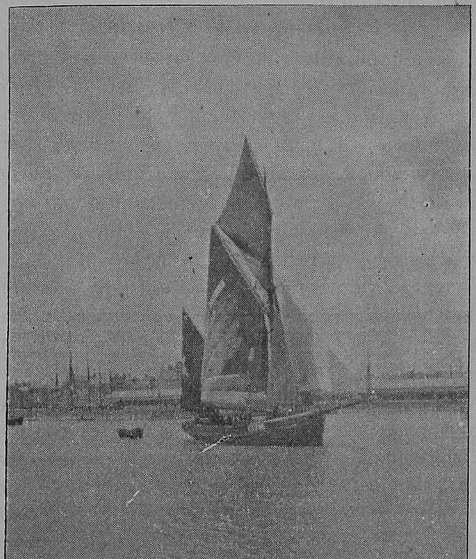
The picture has been printed at the Survey Office, Madras.

OUR HOME LETTER.

In my last letter I promised to report upon the performance of the new hand camera, which I had obtained from Messrs. Butcher and Son, but circumstances (in the form of influenza) were too many for me, and I did nothing much with it until I came to Lowestoft in June.

I have now exposed some three dozen plates, and have got over two dozen very good negatives, mostly of fishing boats entering or leaving the harbour. The camera acts very well in every respect, is very light, and, with a cover which I have adapted to it, I can always carry it ready for exposure. With a few slight alterations, which I propose to have made, I think it will be found in every way suited for work in India.

I am sending with this a few prints from negatives taken with the hand camera. One of them is on the new "C C" Platinotype Company's paper, which seems very good. I developed the last batch of negatives with the "Velox" developer sold by the makers of the Cadett plate. The plates were "ordinary" Hurter and Driffield No 47; the stop used was f 22; the exposure about 1/30th second; and the light fairly good. The images came up within a few seconds, and sufficient density was arrived at in about one minute. The negatives are full of detail, and I feel sure that such results could not have been obtained with pyro and ammonia, even using stop f 16.



I am now trying a new make of plate and paper, and hope to report upon them in my next.

It may interest the members of your Society to know that Mr. Dunsterville (their late Secretary), at the Annual Stereoscopic Competition of the *Amateur Photographer*, gained the first prize (a good medal) for some Indian views. They were made on Mawson and Swan's plates.

[The pictures sent in illustration of the above letter are quite excellent, and will be exhibited at our next meeting. Meanwhile we reproduce in "half tone" one of them representing a fishing-boat coming out of Lowestoft harbour. We congratulate Mr. Dunsterville on his victory at the stereoscopic competition.—ED.]

PROCEEDINGS OF THE SOCIETY.

:o:

Monthly Meeting held at the Masonic Hall, Mount Road, Friday, 2nd July, 1895.

Mr. W. E. Stoney, President, *in the chair*.

The minutes of the last meeting, having been circulated to members, were taken as read and confirmed.

Read Notice of the 40th Annual Exhibition of the Royal Photographic Society, to be held in the Gallery of the Royal Society of Painters in Water Colours, London.

The undermentioned gentlemen have been elected by the Members of the Society to act as Judges, and have consented to serve:—Art Section—Walter L. Colls, Lieut.-Col. J. Gale, F. Hollyer, B. Gay Wilkinson, W. L. Wyllie, A.R.A.—Technical Section.—Capt. W. DE W. Abney, C.B., F.R.S.; Chapman Jones, F.I.C.,F.C.S.; Andrew Pringle, F.R.M.S.

The Exhibition will open on the 28th September, and close on the 14th November.

Medals will be given for the Artistic, Scientific, and Technical excellence of Photographs, Lantern Slides, Transparencies, and for Apparatus. Exhibitors have the option of saying whether they wish their exhibits to go before the Art or Technical Section.

Noted.—Members desiring to exhibit can learn the other conditions by applying to the Honorary Secretary.

Read Letter from Surg. Col. Percy H. Benson, Mysore, kindly placing his dark room at the disposal of members visiting Mysore. Recorded with thanks.

PROPOSAL OF NEW MEMBERS.

Mr. W. H. Oakes proposed, and Mr. E. Thurston seconded, Vet.Capt. E.H. Hazelton of Madras; Mrs. Clement Smith proposed, and Mr. Stoney seconded, Mr. Mildred, Executive Engineer, Anantapur; Mr. Oakes proposed, and Mr. Stoney seconded Mr. J. Chokkanna, Amildar, Devanhalli, Mysore; Mr. Stoney proposed, and Mr. Oakes seconded, H.H. the Bara Thakoor Bahadoor of Tipperah; and they were all duly elected as members of the Society.

THE QUESTION BOX.

H.R.U.E.—What number of bromide half-plate prints may be produced without deterioration in result by 3 ounces of oxalate of potash and iron developer, formulæ as given by the makers, and the prints developed without waste of time? The number of half-plate prints that can be developed with 3 oz. of developer largely depends upon the brand of paper used. We should say six would be the limit. There is, however, nothing gained by trying to do so many, as the chemicals employed are cheap, and weak, worn-out developer necessarily means a waste of time.

D. S.—Some of my negatives are full of little round dents, (after drying); what is the cause of it? This is incipient frilling, and the probable cause of their defect is that the temperature of the developer was too high. You will find it better to reduce the temperature of the water used in mixing your developer either with ice, or by the ordinary method for cooling soda-water employed in the district where you reside. Remember to wash the dishes in this cooled water, as glass and porcelain dishes retain a great amount of heat; cool everything you can, and you will get good sound negatives.

E.T.—How are blue tattoo-marks on a dark skin best brought out in a negative? No one present being able to reply to this, it was hoped that some of our up-country members would give us their experience. In the meantime our Honorary Secretary, who is at present enjoying himself at home, will be asked to obtain information on colour sensitive plates and screens, and their action on blue lines. Mr. E. J. Wall, in an interesting paper read on this subject before the Photographic Club, and reported in the *Amateur Photographer* of the 14th June last, says that colour sensitized plates are sensitized to some extent for green, yellow or red, still that the sensitiveness of the plate is so great to the blue that coloured screens or light filters are used to cut down the blue, or absorb it to such an extent that the ratio between the deposit in the blue is to that on the yellow more equal to their relative visual brightness. We would suggest that the writer of the question should try a photograph or two on isochromatic plates, but as Capt. Abney has stated, and it has become an accepted axiom, that no plates give practically the same results as our ordinary plates if used in the middle of the day, because there is so much white light mixed with the colours, he should be careful to use a yellow screen and the colour sensitive plate will at once prove its superiority. If the photograph is taken later in the day a screen is not so much a necessity, and, if used, care should be taken not to over-correct by using too deep a screen, for as the sun sinks lower the light gets yellower. In a landscape illuminated by a low sun, the light is distinctly yellow wherever the sun falls, but the shadows are illuminated by a blue light which is reflected from the sky. To use a screen under these circumstances would mean simply that you would intensify your shadows, and therefore get a negative with far too much bare glass and too full of contrast.

E. E. S.—I would feel much obliged if you could inform me what is a good developer for Eastman's Bromide and Eastman's platino-bromide papers? We know of no better developers than those recommended by the Eastman Co., in their circulars which will be found in each packet of papers.

W. T. A.—I enclose two prints from negatives which were, I think, spoiled by the developer and water being at too high a temperature. The heat was extreme at the time, and as the atmosphere was at the same time surcharged with moisture, water could not be cooled in the usual manner, and no ice was available. I shall be obliged if any of the members will, if they think that my explanation is correct, tell me at about what temperature development should be carried on? The prints have been spoilt by the use of too warm a developer. It is a pity, as No. 1 would have made

a very pretty picture. The proper temperature for the developer and washing water should be about 70 degrees, but it is generally more often 80 to 90 degrees in this country.

MONTHLY COMPETITION.

A Native Industry.

Pictures were exhibited by members of the Society as under :—

1. Teapicking on the Nilgiris 2. A Teapicker do 3. Teapicking do	Mrs. Upcott, Coonoor.
4. Rice Cultivation (Ploughing), 5. Do (Nurseries) 6. Net Making and Mending 7. Gathering Leaves	Mr. R. Bentley-Taylor, Mangalore.
8. Hunsur Basket-Makers	Miss Speechly, Mysore.
9. Weavers Working Singly 10. Do do in a Group 11. Making Cedarwood Cigar Boxes	Mrs. Shaw, Dindigul.
12. An Oil Mill in Travancore	H. H. The First Prince of Travancore.
13. A Madras Farrier	Mr. Ellison.
14. A Tranquebar Book-binder 15. Do do	Rev. E. Maennig. Tranquebar.
16. Cuddapah Wood-sellers 17. do Potters at Work 18. do Open-air Vegetable Market 19. do Sujah Women with Firewood	Mr. Harley, Madnapalli.

The President said he was very glad to see that our up-country members had so willingly responded to his remarks, and, although the present exhibition was a very distinct improvement on all previous meetings, yet he would still like to see a larger number of members exhibiting. Seven exhibitors out of a possible hundred hardly showed the amount of interest that he expected. As regards the quality of the prints exhibited this month, they were, on the whole, extremely good, and showed that great care had been taken in composition, developing, and printing. There was, however, one fault that somewhat detracted from the general interest of the pictures, and that was that, in nearly every instance, the figures in the picture were nearly all staring into the camera; no doubt members would avoid this in the future, and endeavour to give their pictures a more realistic appearance.

The remarks of the Committee entrusted with criticism of the pictures, in accordance with the promise made last month, will be found in our Correspondence columns, with the initials of the senders.

The picture considered the best was the one exhibited by Mr. Ellison, and entitled a "Madras Farrier," and it was decided to reproduce it in half tone. Some of the other pictures were decidedly full of merit, and the Committee will be glad to have well-printed, unmounted copies for insertion in the Society's album of "Tea picking" and "Tea pickers", and "Potters at Work."

It was decided to reproduce two pictures of a "Travancore Book-binder" in order to illustrate the fault the President complained of.

Picture Subject for the Next Month.

The subject for the next monthly competition will be "English or Indian Types of Children." The President said he would like the subject to be treated in an unconventional manner. It will doubtless be easy for every member to send in a photograph of a pretty child or pretty children, but he thought an endeavour should be made to portray pretty pictures of pretty children. To convey a more correct idea of what he meant, he might say that he had recently seen very pretty pictures of "The Heads of two Children grouped," "Ride-a-cock-horse," "Three Little Maids from School," "Tired out." Each picture should have legibly written on the back the description of camera, lens, number of stop, time of exposure, light, time of day, and maker of plate.

The Special Lantern Slide Exhibition.—"India or the Land of the Rising Sun," illustrated by 144 slides, was the intellectual and optical treat offered to the members by Mr. W. E. Stoney, the President. Mr. Stoney explained the views. A map, showing the routes taken on two different tours, the southern half of India being traversed first, and the upper half by a second tour. India is a favourite place for travellers, and the grand scenery on the ghauts, the tongas and other means of native conveyance, the curious races and costumes, the pictures of ancient cities, temples, &c., were all beautifully depicted in the slides, but unfortunately, owing to a misunderstanding with the Honorary Secretary's butler, who firmly, yet respectfully, declined to lend the Society the use of its lantern, without written authority from his master, the illustration on the screen was on this occasion unavoidably postponed.

The President exhibited one of Wynne's Exposure Meters, and said it was one of the best he had ever used: it was simple and easy to work and absolutely certain. A description of it will be found in our next issue. He also showed a Single Lantern Slide Carrier called the "Eclipse" (Beard's Patent), which he considered the most perfect carrier yet made, and is obtainable at a reasonable price.

The usual vote of thanks to the Chairman was proposed and carried.

The President, in returning thanks, said he would be glad to see a larger attendance of members. It was somewhat disheartening to see so small an interest taken in the meetings. No doubt, as this was the vacation, many members would be away, but he thought that those who were in Madras should have attended. He also wished to remind the members that the meetings were open to members and their friends of either sex.

The next meeting will be held on Friday, September 6th.

CORRESPONDENCE.

NOTE.—*Members are invited to contribute to this column the result of their experiences, the formulæ and method of working they like best, and the shifts and devices they are put to when overcoming any difficulty; also any enquiries they may wish to make.*

Also, under this heading, the Committee will publish their criticisms on Pictures sent to them during the month. Many photographs are good in many ways, but as it will be of much more value to point out their weakness than to extol their virtues, the bad points only will be mentioned. Prints should be sent flat, with name and address of sender, together with particulars of exposure given and plate and lens used.

R. H. E. ELLISON (Madras).—"A Farrier"—This is a bromide print showing a Farrier at work; his attitude is good and the surroundings picturesque; it is a pity that the boy is not attending to his work. Being considered the best picture of the month, we have reproduced it in half-tone.

MRS. UPCOTT (Coonoor).—"Tea Picking on the Nilgiris"—Two sharply-focussed, excellent photographs of a Tea Estate. The figures are well arranged, but most of them are painfully conscious of the photographing, especially in the picture marked 3. A "Tea Picker," representing a Tamil cooly with basket, is an excellent picture, full of detail.

MR. R. BENTLEY TAYLOR (Mangalore).—"Rice Cultivation" (four pictures.) "Ploughing"—The subject is well chosen, and would have been much improved if a larger stop had been used; there is a great want of detail. "Nurseries"—The subject is an uninteresting one, the background is exceedingly dark, and the picture all at the bottom of the plate. "Net Making"—This would have been improved by reversing the back so as to allow of more foreground; the figures at each side are out of focus; if you try this again, focus on the net. "Gathering Leaves"—This is much better; a picturesque spot with the subjects well arranged. It is a little dull and flat, and the figures hardly look the title.

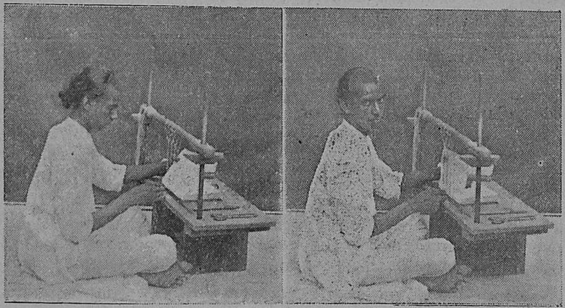
MISS SPEECHLEY (Mysore).—"Basket-makers"—A fairly well-made photograph of a group of basket-makers working in the verandah of a native hut; it is full of detail, and nice clean work, but is spoilt by one of the posts supporting the verandah cutting one of the figures in half. Here, again, attention is obviously directed on the camera and not on the work.

MRS. SHAW (Dindigul).—"Weavers Working Singly" and "A Group of Weavers"—Interesting as recording the method of weaving; the figures are naturally arranged, and the composition satisfactory; the brown pink tone is not pleasing. In the absence of any information as to the toning bath used, we should say it is caused by an insufficiency of gold; the presence of hypo in the dish would have almost the same effect. "Making Cedar Cigar Boxes"—The figures are badly grouped, the men sawing completely hiding the occupations of the rest. Groups are difficult things to take, and the photographer should study the subject a little.

THE FIRST PRINCE OF TRAVANCORE (Trevandrum).—"An Oil Mill"—As a photograph, this picture is quite satisfactory. As a composition it requires the cattle to be brought round a little further, the pole and bullocks being in the picture parallel to the horizon.

H.C. HARLEY (Cuddapah).—"Wood-Sellers"—There is something rather above the common in this picture; the contrasts are however a little too marked. Probably the same exposure with a little smaller stop and a slower development would have much improved it. "Potters at Work"—This is the second best picture exhibited; it represents a number of potters actually at work mixing clay, moulding pots, and spinning a potter's wheel. Unfortunately the picture is spoilt by bad trimming; had you cut it down at the line marked it would have been technically perfect. Both this and the first pictures are printed on Eastman Solio Paper, toned and fixed with the Combined Bath. "Open Air Vegetable Market"—This is very much out of focus, and rather commonplace; no particulars are given as to the kind of camera, lens, stop. "A Vyal Bazaar"—Not at all badly chosen, but the lighting is bad, otherwise it is fairly good. "Sujah Women with Firewood"—This is an interesting picture, and it is only to be regretted that a larger plate was not used. What this picture wants is the figure in the background brought out and less contrast; the balance is good, and the arrangement and posing easy and natural.

REV. MAENNIG (Tranquebar).—"A Group of Tranquebar Mendicants"—This is an excellent picture of a number of poor people who evidently knew that they were going to have their pictures taken; but mendicants do not have their photographs taken simply for the love of photograph. Their real hope will probably be not unconnected with the receipt of coin. This being so, it would have looked more natural to have had one or two of them holding out their hands or soliciting alms in their own fashion. Two photographs of a "Book-binder"—These prints would have been better vignetted, as the size of the figure is too small for the screen. We have reproduced both prints in order to shew the disadvantage of your subject staring into the camera. We think a bromide or platinum print vignetted would be much more pleasing.



SURGEON-MAJOR ADAMS (Karnal, Punjab).—"The Mistri Khana"—represents a native carpenter's shop in the Punjab. It is a pity that the figures are obviously being "took." The chief interest is the curiously shaped saw used for cutting up the longer pieces of timber. "Agriculture" (A Mahindapur Plough followed by a wooden Roller)—An excellent photograph, of an interesting subject. The toning of those two prints is not very pleasing.

The following picture was sent for exhibition and criticism:—

H. H. THE FIRST PRINCE OF TRAVANCORE.—"A Double-headed Nightingale." This is a subject peculiarly interesting to medical men and scientists.

ANSWERS TO CORRESPONDENTS.

Special Notice—*Letters requiring an answer in this column must be received not later than the 5th of each month.*

All queries should be written on one side of the paper only, and be signed with the name and address of sender.

D. H.—(1) "I have been using the pyro potash developer, but I see that pyro soda is generally recommended by makers. Which developer is the best?" There is very little to choose between them, the latter gives rather softer negatives. (2) "How can I prevent loss of tone in fixing a toned print. I use the borax toning bath?" This cannot be avoided, and you must make allowance for it when printing. A little practice will enable you to say when a print is deep enough. Also make the fixing bath alkaline with ammonia.

C. F.—"Can the gummed *backing papers* be left in whilst developing negatives, or would the colouring matter and the gum have injurious effects?" The backing papers will do no harm by being left on; they can be removed after developing.

H. P. S.—"How can I remove pyro stains from the hands and clothes?" Oxalic acid or the ordinary alum and citric acid clearing bath will remove pyro stains from the clothes or hands. If this does not do, place the cloth in a saturated solution of oxalic acid and allow to steep for some time, next place material now impregnated with acid in a 10 per cent. solution of chloride of lime, and finally wash in clear water. A little rubbing will quicken the process.

W. H.—"How I can ascertain whether my dishes are free from hypo? I have reason to believe that my boy in cleaning up has spilt some of the hypo bath over some of the dishes." There are various way of testing for hypo. The most simple is perhaps to dissolve 2 grains of permanganate of potash and 20 grains of potassium carbonate in 40 ounces of water; a few drops of this will turn from pink to greenish yellow or brown when added to water which is not free from hypo.

F. L.—Why wait till you get something presentable before you submit for criticism? We might be able to help you and save your temper and pocket. From your modest way of putting things we should say you could produce good work.

Alex. S.—"What is a saturated solution of chrome alum?" A saturated solution of any salt is a solution which cannot take up or dissolve more of that salt at a given temperature—for example, 100 parts of water at a temperature, of 59 degrees F. will dissolve 9·5 parts of chrome alum, and the result will be a saturated solution. If the temperature rises, some salt will be dissolved; if it falls some of the salt will crystallize.

Amateur.—"I want to make a back ground as cheaply as possible. Could you give me any idea how to do it?" Take some stout unbleached calico, damp it thoroughly, and whilst wet strain it tightly on a frame of the desired size. Then paint over with stiff size, and allow to dry. Then paint over with flatted oil of the desired tint on some of Morse's calcarium, or well mixed distemper colour will answer.

Mrs.—"Can you give me a formula for toning bromide prints to a nice warm sepia?" Uranium nitrate 100 grains, potassium ferricyanide 100 grains, water 10 oz. glacial acetic acid $\frac{1}{2}$ oz. After fixing wash thoroughly, immerse for ten minutes in 5 per cent. solution of hydrogen peroxide or $\frac{1}{2}$ per cent. solution anthion, wash well, then immerse in above bath until the desired tone is obtained, then wash in acidulated water for half an hour.

ABSTRACTS.

Temperature and Development.—Very few dark-rooms are properly arranged to secure the right temperature for good work. I would have the plates of the same temperature as my developer and fixing solution. In the summer I have never found it necessary to use ice, because, when a dark-room has plenty of fresh air in it all the time, heat will not be a trouble. In winter time all trouble can be overcome by heating slightly both plate and developer.—B. Larrimer in *Wilson's Photographic Magazine.*

The Amateur Photographer and His Journals.—*Wilson's Photographic News says*:—One of the strangest and most incomprehensible phases of our art is that, with new discoveries and new methods being brought forward every day, so very few amateur photographers subscribe to the Journals which are prepared and published for there help—to keep them abreast of the times. Here and there you will find a stray sample copy lying neglected. And, more unusual still, one sees a pile of one or more volumes of photographic periodicals. This should not be; nor is there any legitimate excuse for it. *Read, gentlemen, read!* Education is cheap, and cannot be neglected with impunity.

Hand *v.* Stand Cameras.—*The Photographic Review of Reviews*, commenting on an article which appeared in *Anthony's Bulletin*, says:—"This year sees the almost universal adoption by amateurs of cameras that can be used both as hand or detective, and as tripod cameras. This seems to us only as it should be, for there are occasions when the hand camera is absolutely essential, and it is also recognised that for really serious work examination of the image on the ground glass is imperative. We reiterate our remarks of last year, and maintain that the camera must be on a tripod, and careful attention given to composition and focussing in order that really artistic and valuable work may be done. It is true that with the hand camera many exquisite bits have been obtained, but it is also true to a very large extent that these were greatly the result of chance. The majority of cameras are fitted with extremely small finders, the images on which bear a very uncertain relation to the image on the ground glass. Again, this image is so small that it suffices only to give a very hazy idea of the actual picture that is obtained. Then again, there is a great temptation to disregard all proper use of diaphragms, to guess at the focus, and to give an exposure which may or may not be correct. In a great many cases the speed of the shutter is entirely unknown, and one diaphragm and one speed of shutter are usually used the year around.

When the camera is on the tripod, it is an indication that the operator has determined upon some deliberate work. Care is exercised in composition and focussing, and the image, of the size that it will appear in the finished picture, may be properly examined.

Some of our best workers have absolutely denied the right of the hand camera to earnest consideration, but have now come to the conclusion that the hand camera certainly has its uses, but for careful and representative work the camera must be upon a tripod.

A Cheap Printing Paper for Amateurs.—Mr. H. W. Bryning, in *The Journal of the Photographic Society of India* for July, describes a printing paper, sensitized with an iron solution and developed with a solution of nitrate of silver, which he has succeeded in producing, by which the black and sepia tones, so much admired in the platinotype paper, can be obtained at will. The process will be described, and specimen prints exhibited at the next meeting of the Society. In the meantime, the editor will try the process himself.

A New Fixing Bath.—The following is taken from *Photography*—Water, 22 ounces; Bisulphate of Soda, 5 drachms; Hypo, $2\frac{1}{2}$ ounces; Chrome Alum, 1 drachm; Citric Acid, 7 drachms. It is said to yield negatives that are very pure and brilliant, and to keep exceedingly well.

Keeping Exposed Plates.—Many photographers, when they are busy, make exposures right along, and place the exposed plates, face down, in an empty box, until they have time to develop them. This is entirely wrong. Plates should be kept after exposure just as they are sent out from the factory, packed closely face to face. The hypo in the strawboard of which boxes are made, if the plates are placed in contact with the box, affects the surface, and the part so affected will develop quickly, giving an uneven negative.—M. A. Seed in *Wilson's Photographic Magazine.*

EXTRACTS.

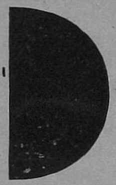
How to take Photographic Doubles.

A good paper "How to take Photographic Doubles," has appeared in *Work*, June 1st.

Taking doubles is very easy, is one of the most entertaining branches of the photographic art, and can be done without additional outlay. The great variety of funny pictures which can be obtained is numberless. For instance, I have taken a man drawing a cart containing himself, a man in a child's cot apparently rocking himself, etc.

Now as to the way the trick is done. I recommend rapid plates for the work. A piece of card cut out of a stiff mount of the same shape and size as Fig 1, and blacked with ink on both sides, is all that is needed beyond the camera.

FIG. 1



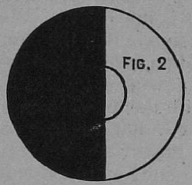


Fig. 1.—Disc of Inked Cardboard. Fig. 2.—Original Position on Lens.

First place the furniture as if two persons were to be taken. Now let the person to be photographed take up one of the two positions, and focus with open aperture. This having been satisfactorily done, insert the card in the hood of the lens (before the lens) as shown in Fig. 2. Then screw the hood to the left, to bring the opening as shown in Fig. 3. The black piece of card should fit tightly in the hood and nearly cover the lens. The best plan is to cut it to cover and clip off very narrow strips until half of the ground glass is in darkness.

Again look at the ground glass (the person to be taken should occupy the facing position the exposed portion of the lens); the image should be visible, and the shade should reach the middle of the picture.

Having made sure on all these points, put on the cap, draw the slide, and expose. The time should be about the same as if working F 30, because of the eclipse of the lens.

Having exposed and capped very carefully, screw the hood back to its original position to the right (Fig. 2.)

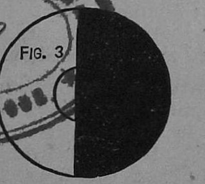
Now request the person to take the other position; caution him not to move any of the furniture or scenery in the slightest. Having satisfied yourself that he is properly posed (and let the positions be as easy and careless as possible, so that there may be a look of reality about the picture), take off the cap with the greatest care, and let the second exposure be of precisely the same duration as the first.

If convenient, develop at once, so as to have another try to remedy defects in your early experiments, for doubles (like everything else worth doing) need persistency in order to give pleasure and creditable results.

The necessity for screwing the hood as indicated will be very obvious, because, after the slide is drawn, it is impossible to see the position of the card (Fig. I.), and to shut and open the slide between the first and second exposures would shake the camera and probably altogether spoil the picture.

The light should be clear and good; I prefer out of doors (parks or woods). Fierce sunlight I do not recommend; it causes scowling faces.

I suggest (especially to beginners) that the feet of the person



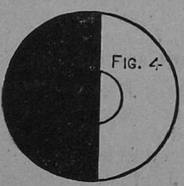


Fig. 3.—Card turned for First Exposure. Fig. 4.—Position for Final Exposure.

to be taken should not be allowed to come near to the centre of the plate, and it is a good thing in a general way to keep legs and feet away from the furniture in the centre of the plate. The probability is that development might reveal an apparent entanglement of the feet.

List of Members, resident in Madras, whose Dark Rooms are available for use by Members of the Madras Amateur Photographic Society, whenever they visit Madras.

J. L. Van Geyzel, Dare's Gardens, Chetput.
J. L. Walker, Holloway's Gardens, Pantheon Road, Egmore.
T. P. S. Nagaratnam, 47, Malayappen Street, Black Town.
A. W. G. Stranack, Kilpauk.
A. Chatterton, College of Engineering, Chepauk.
W. H. Oakes, Anderson's Road, Nungumbaukum.
Surg.-Col. P. H. Benson, Mysore.

SALE AND EXCHANGE.

NOTICE.—Members of the Madras Amateur Photographic Society are permitted to use this column free of charge for two insertions of each advertisement—all subsequent insertions of the same being chargeable at 2 Annas a line. When an advertisement becomes liable to this charge, it will not be inserted unless a postal order or stamps to the value of the charge are previously sent, addressed to Oakes and Co., Ld., Mount Road, Madras. Advertisements received up to the 5th of each month will be inserted in the next issue of the Journal; those received after this date will be held over for the subsequent issue.

Subscribers, and others who are not regular dealers, may make use of this column for advertisements by paying at the rate of 3 Annas a line.

For Sale.—Improved Special Simplex Camera, whole plate. All modern improvements. Revolving Turntable—3 Double Dark Slides, spring clips, 3 spare lens fronts, carriers for ½ plates, etc. Quite new and in perfect order. Only used a few times. Complete in case, with folding tripod stand in separate case. *Price Rs. 230* without lens.

Apply to Surgeon-Major Farmar-Bringhurst, A. M. S., Poonamallee.

For Sale.—Dalmeyer's 2 B Patent Portrait Lens, with Studio ½-plate Bellows Camera, 1 Double and 1 Single Slide, and Tripod. *Price Rs. 200.*

Talbot and Eamer's Hand Camera, for twelve ¼ plates, Changing Bag, 2 Finders, R. R. Lens, Fixed Focus, T. and I. Shutter. *Price Rs. 50.*

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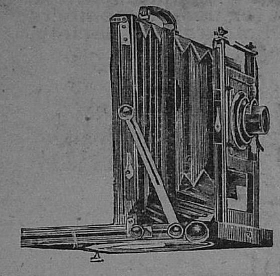
N.B.—The Journal is issued on the 15th of each month, and is posted free to members of the Madras Amateur Photographic Society.

All communications connected with the issue of the Journal should be addressed to Messrs. OAKES & Co., Ld., Mount Road, Madras, and letters for the Editors should be addressed to them, care of the Honorary Secretary of the Society, Chetput, Madras.

OAKES & COMPANY, Ld., MADRAS.

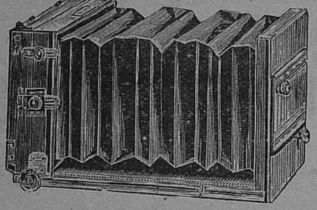
ROSS' IMPROVED CAMERA.



A light and strong Camera, made of the finest well-seasoned, Spanish Mahogany, size 5" x 4", well framed together, Square Bellows Body, 3 Double Backs, rack and pinion adjustment; fitted with a Ross' Rapid Symmetrical Lens, with Iris Diaphragm Brown Canvas Waterproof Case, leather bound, lined green baize, with shoulder straps.

Cash Rs. 240, Credit Rs. 270.

THE "FALLOWFIELD" CAMERA.



A compact, brass-bound, Spanish Mahogany long extension square leather bellows; rising and falling front; double swing back; rack-work focussing, with 3 double dark slides and tripod.

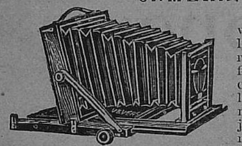
HALF-PLATE.

Cash Rs. 150-0, Credit Rs. 173-0.

QUARTER-PLATE.

Cash Rs. 112-0, Credit Rs. 128-12.

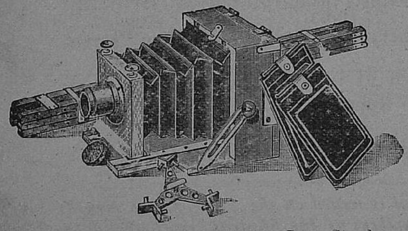
"TOURIST" HALF-PLATE CAMERA.



A thoroughly well-made Camera, light, strong, and rigid when erected, fitted with best conical varnished leather bellows, rack and pinion adjustment, swing and reversing back, rising and falling front, loose circular lens board, with 3 Double book form slides, with Double hinge shutters, side clasps and ivory numbers.

Cash Rs. 87-8, Credit Rs. 99-8.

THE AMATEUR'S OUTFIT.



Consisting of bellows body Camera, Lens, Stand, and 4 single Metal Dark Slides. It is a thoroughly sound little article; reliable and well finished in Mahogany.

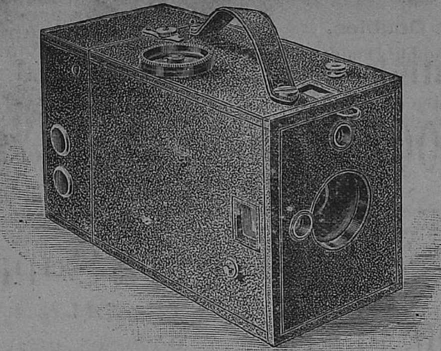
HALF-PLATE.

Cash Rs. 75, Credit Rs. 85.

QUARTER-PLATE.

Cash Rs. 45, Credit Rs. 50.

EASTMAN'S KODAKS.



No. 3. Kodak "Junior." For rectangular pictures, 3¼" x 4¼"; capacity 60 exposures without reloading; size of Camera, 4¼" x 5⅞" x 9¼"; weight loaded 3 lb. 7 oz. Loaded with 60 exposures, including sole leather carrying case and manual of instruction.

Cash Rs. 180, Credit Rs. 205.

SPARE SPOOLS OF FILMS FOR SIXTY EXPOSURES.

Cash Rs. 13-8, Credit Rs. 15-8.

No. 5. Kodak "Folding." For rectangular pictures 7 x 5 inches; capacity 54 exposures without reloading; size of Camera (folded), 10 x 7½ x 9 inches; weight loaded, 9 lb. 5 oz.; complete with shoulder strap, loaded with 32 exposures, fitted improved frictionless shutter, and manual.

Cash Rs. 305, Credit Rs. 345.

SPARE SPOOLS OF FILMS FOR 32 EXPOSURES.

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CLAMPING REELS.

For No. 3 Kodak (Junior) and No. 5 Kodak (Folding).

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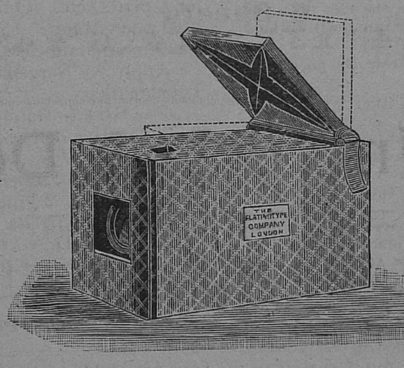
THE IMPROVED KEY CAMERA.



	Cash Rs.	Cash A.	Credit Rs.	Credit A.
Key Camera, ¼-plate, complete with R. R. Lens, Shutter, and 6 double-key Slides	170	0	195	0

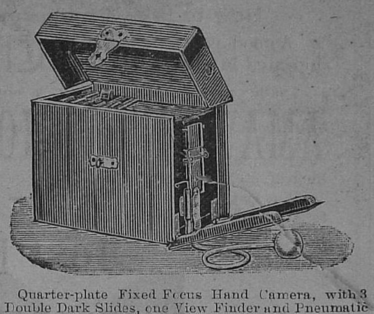
LENSES.

	Rs.	A.	Rs.	A.
Wray's Rapid Rectilinear, with Iris diaphragm. Size 5 x 4	70	0	80	0
Do do ,, 6½ x 5	90	0	107	0
Taylor, Taylor & Hobson's R. R. Size 6½ x 4¾	70	0	80	0
Do do ,, 8½ x 6½	115	0	130	0
Do do ,, 10 x 8	150	0	170	0

LIGHT, RIGID BAMBOO STANDS FOR HAND CAMERAS.

	Rs.	A.	Rs.	A.
No. 1, Strong, Rigid and Reliable. Height 3 ft. 9 in. and only weigh 15 oz.	5	0	5	12
No. 2. Two-fold, Brass mounted complete with Strap for carrying	15	0	17	0

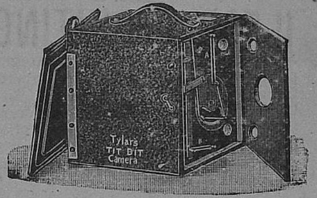
GRIFFITH'S HAND CAMERA.



Quarter-plate Fixed Focus Hand Camera, with 3 Double Dark Slides, one View Finder and Pneumatic Release to Shutter.

Cash Rs. 45, Credit Rs. 50.

THE "TIT BIT" CAMERA.



Leather-covered, Collapsible Handle and Double Finders for vertical and horizontal use. The Lenses are specially selected and will cover a ¼-plate sharply to the extreme corners. No complications; it is strong and durable with six single metal slides. Weight 24 oz., size 5¾ x 4¼ x 5¼.

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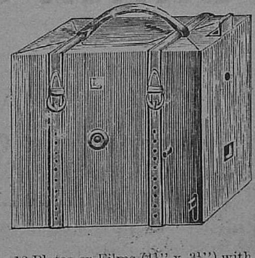

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Cash Rs. 120, Credit Rs. 135.

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No. 738.—A 5" x 4" Ross' Portable Divided Camera, with 6 Double Dark Slides, Bausch and Lamb Shutter for Lens, Solid Leather Sling Case with lock and key, to contain 6 Double Dark Slides, with carrying strap.

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